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EXAMINER

DANIEL JR, WILLIE J

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/914,953
Filing Date: October 24, 2001
Appellant(s): JUUTI ET AL.

Phouphanomketh Ditthavong (Reg. No.: 44,658)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 28 April 2010 appealing from the Office action mailed 01 July 2009.

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(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:
Claims 22-38.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

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(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The appellant failed to provide proper limitations of the appealed claims contained in the Appendix to the appellant's brief. For example, claim 29 recites "...trying to **fmd** a..." in line 27 of the claim. The Examiner interprets as --trying to **find**-- (see claim 29 in amended response filed 10 April 2009).

(8) Evidence Relied Upon**A. Patent Documents**

WO 98/30056	SALMELA et al.	07-1998
US 6,334,052 B1	NORDSTRAND	12-2001
US 5,903,832	SEPPANEN et al.	05-1999
US 6,212,390 B1	RUNE	04-2001

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(9) Grounds of Rejection Applicable to Appeal Claims

The following ground(s) of rejection are applicable to the appealed claims:

A. Claim Rejections - 35 USC § 112

Claim 38 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- a. **Claim 38** recites the limitation "...other than the location areas and the exclusive location areas..." in line(s) 40-41 of the claim.

Regarding **claim 38**, the claim(s) include(s) a limitation that is not supported by the instant application as originally filed. The applicant failed to provide support (i.e., page(s), line(s), and drawing(s)) for the newly amended claim limitation. The applicant is advised to review the subject matter of the specification (see pg. 7, [0033]), which basically describes cells belonging to location service area are either exclusive or not. Applicant is advised to clearly and concisely provide claim language that is consistent and correlates to the specification and mindful not to improperly utilized language that is clearly not supported. The Examiner respectfully requests the applicant to provide page(s), line(s), and figure(s) of the instant application that supports the limitation of the claim(s) and/or any supportive comment(s) to help clarify and resolve this issue(s).

B. Claim Rejections - 35 USC § 103

Claims 22-27 and 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Salmela et al.** (hereinafter Salmela) (**WO 98/30056**) in view of **Nordstrand (US 6,334,052 B1)** and **Seppanen et al.** (hereinafter Seppanen) (**US 5,903,832**).

Regarding **claims 22, 29-30, 34, and 38**, Salmela discloses a method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells (see abstract; pg. 1, lines 4-6; pg. 8, lines 17-25; pg. pg. 4, lines 9-12; pg. 14, lines 22-25; Figs. 1), where the system provides restricting connection of a mobile station (MS) to a cell, the method comprising:

defining location areas each associated with a respective Location Area Code (LAC) and comprising a group of cells so that each cell of the mobile communications system belongs to a location area, wherein within each location area, the mobile station may move without updating its location (see abstract; pg. 1, lines 4-6; pg. 8, lines 17-25; pg. pg. 4, lines 9-12; pg. 14, lines 22-25; Figs. 1), where the system provides restricting connection of a mobile station (MS) to a cell,

defining localized service areas each associated with a respective Localized Service Area identification (LSA-ID), wherein the localized service areas may overlap and be discontinuous so that a cell may belong to one or more localized service areas or to none of the localized service areas, and a localized service area may comprise cells belonging to different location areas so that when the mobile station is moving within the localized service area a location update may be triggered because the location area changes (see abstract; pg. 1, lines 4-6; pg. 8, lines 17-25; pg. pg. 4, lines 9-12; pg. 14, lines 22-25;

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Figs. 1), where the system provides restricting connection of a mobile station (MS) to a cell,

defining some of the location areas (LAs) to be localized service areas (LSAs - LSA1-3) which reads on the claimed “exclusive location areas” each exclusive location being identified with a respective LAC (e.g., LAI), an exclusive location area (LSA1) comprising special cells (C1-C3, C5, C11) which reads on the claimed “exclusive cells” for which a special service which reads on the claimed “exclusive service” condition is defined (see pg. 4, lines 1-12; pg. 5, lines 14-18; pg. 7, lines 26-28; pg. 8, lines 6-12; Figs. 1-2), where the system can determine which cells are special cells (see pg. 5, lines 19-27; pg. 12 lines 20-27),

so that a location area is either an exclusive location area (e.g., LSA1 or special cell C1) or a non-exclusive location area (see pg. 5, lines 19-27; pg. 12 lines 20-27), where the system can determine which cells are special cells as evidenced by the fact that one of ordinary skill in the art would clearly recognize;

broadcasting an LAC of a cell and, if the cell belongs to at least one localized service area, broadcasting an LSA-ID of each localized service area to which the cell belongs (see pg. 2, lines 6-11; pg. 4, lines 26-28; pg. 13, line 31 - pg. 14, line 5);

receiving, via the cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and includes a LAC for the new location area to which the subscriber would like to update (i.e., location area identifier/index - LAI) (see pg. 2, lines 9-17; pg. 2, line 35 - pg. 3, line 2; pg. 4, lines

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23-24; pg. 4, line 31 - pg. 5, line 9; pg. 8, lines 13-16; pg. 9, lines 19-23; pg. 10, lines 25-29; pg. 11, lines 19-23; pg. 14, lines 21-25; Figs. 2-5 “message 21”);

checking during the location update procedure whether the new location area (i.e., location area identifier/index - LAI) indicated by the LAC (e.g., location area identifier - LAI) is defined as an exclusive location area (LSAs - LSA1-3) (see pg. 5, lines 6-9; pg. 6, lines 12-19; pg. 8, lines 17-25; pg. 11, lines 23-26; pg. 12, lines 10-19; pg. 14, lines 26-31; pg. 15, lines 14-24); and

if the new location area (i.e., location area identifier - LAI) is an exclusive location area (LSAs - LSA1-3) (see pg. 12, line 28 - pg. 13, line 5; pg. 14, lines 28-31; pg. 15, lines 14-24),

using the exclusive service condition of the cell (C1-C3, C5, C11) in determining whether or not the subscriber is allowed to camp (i.e., connect) in the cell (see pg. 14, lines 14-18; pg. 14, line 28 - pg. 15, line 3; pg. 15, lines 14-24; pg. 8, lines 6-12; Fig. 1-2),

allowing the mobile station (MS) to camp (i.e., connect) in the cell by accepting the location update if the subscriber is allowed to camp (i.e., connect) in the cell (see pg. 13, lines 1-5; pg. 14, lines 14-18; pg. 14, line 35 - pg. 15, line 1; pg. 15, lines 14-24), and

preventing (i.e., restricting) the mobile station (MS) from camping (i.e., connecting) in the cell by rejecting the location update if the subscriber is not allowed to camp (i.e., connect) in the cell (see pg. 13, lines 1-5; pg. 5, lines 14-18, 21-35; pg. 15, lines 1-34). Salmela inexplicitly discloses having the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has localized service

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information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs; if the subscriber has the localized service information, using it to determine whether or not the subscriber is allowed to camp in the cell; and if the subscriber has no localized service information, allowing the subscriber to camp in the cell; if a suitable cell is not found, entering a limited service state. However, the examiner maintains that the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has localized service information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs; if the subscriber has the localized service information, using it to determine whether or not the subscriber is allowed to camp in the cell; and if the subscriber has no localized service information, allowing the subscriber to camp in the cell was well known in the art, as taught by Nordstrand.

In the same field of endeavor, Nordstrand discloses the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has localized service information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs (see abstract; col. 4, lines 6-9, 32-50; col. 6, lines 1-20, 28-45);

if the subscriber has the localized service information, using it to determine whether or not the subscriber is allowed to camp in the cell (see abstract; col. 4, lines 39-50; col. 5, lines 1-20, 28-59; col. 7, lines 14-29, 43-49; col. 8, lines 9-17); and

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if the subscriber has no localized service information, allowing the subscriber to camp in the cell (see col. 10, line 41 - col. 11, line 6; Fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salmela and Nordstrand to have the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has localized service information which comprises at least one localized service area identification (LSA-ID) with information about the subscriber's access rights outside the LSA-IDs; if the subscriber has the localized service information, using it to determine whether or not the subscriber is allowed to camp in the cell; and if the subscriber has no localized service information, allowing the subscriber to camp in the cell, in order , as taught by Nordstrand (see col. 7, lines 22-29; col. 8, lines 10-17). The combination of Salmela and Nordstrand does not specifically disclose having the feature if a suitable cell is not found, entering a limited service state. However, the examiner maintains that the feature if a suitable cell is not found, entering a limited service state was well known in the art, as taught by Seppanen.

In the same field of endeavor, Seppanen discloses the feature if a suitable cell is not found, entering a limited service state (see col. 10, lines 5-12), where a mobile terminal having enhanced system selection capability enters a limited service state if a suitable system cell for communication is not found.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salmela, Nordstrand, and

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Seppanen to have the feature if a suitable cell is not found, entering a limited service state, in order to save battery power and/or processing resources, as taught by Seppanen.

Regarding **claim 23**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed, as applied above (see claim 22), in addition Salmela further discloses a method according to claim 22, the method further comprising maintaining information about location areas (e.g., LAI) that are defined as exclusive location areas (LSAs - LSA1-3) in a network element (e.g., database) configured to reject or accept location updates (see pg. 4, lines 18-22; pg. 5, lines 19-27; pg. 14, line 26 - pg. 15, line 4; pg. 15, line 34 - pg. 16, line 1; pg. 8, lines 17-25; pg. 15, lines 14-24).

Regarding **claim 24**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed, as applied above (see claim 23), in addition Salmela further discloses a method according to claim 23, the method further comprising:

maintaining cell (C1-C3, C5, C11) information indicating whether a cell (C1-C3, C5, C11) is an exclusive cell (C1-C3, C5, C11) (see pg. 4, lines 18-22; pg. 5, lines 19-27; pg. 8, lines 6-30; pg. 11, lines 20-35; pg. 12, line 20 - pg. 13, line 5; pg. 13, lines 18-26; pg. 14, lines 28-35; pg.15, lines 26-33; pg. 8, lines 6-12; Figs. 1-2), where the mobile station operates in location service areas (LSAs - LSA1-3) ; and

using said cell information to define whether the new location area is an exclusive location area (LSAs - LSA1-3) (see pg. 8, lines 6-30; pg. 11, lines 20-35; pg. 12, line 20 - pg. 13, line 5; pg.13, lines 18-26; pg. 14, lines 28-35; pg. 15, lines 26-33; Figs. 1-2).

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Regarding **claim 25**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed, as applied above (see claim 22), in addition Salmela further discloses a method according to claim 22, the method further comprising:

receiving an indication (e.g., message 32) indicating whether the cell is an exclusive (i.e., special) cell during location update (see pg. 8, lines 20-30; pg. 9, lines 26-30; pg. 11, lines 11-18, 23-35; Figs. 3A-B and 4B), where message 32 transmitted from the intelligent network to the visitor location register; and

deciding on the basis of the indication whether the location area of the cell is an exclusive location area (see pg. 5, lines 19-27; pg. pg. 12, line 20 - pg. 13, line 5; pg. 14, line 22 - pg. 15, line 33; Figs. 1 and 5).

Regarding **claim 26**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed, as applied above (see claim 22), in addition Salmela further discloses a method according to claim 22, wherein

the exclusive cells (C1-C3, C5, C11) are exclusive access cells belonging to one or more localized service areas (see pg. 4, lines 1-15; pg. 5, lines 18-27; pg. 8, lines 6-9; pg. 14, line 14 - pg. 15, line 33), where only certain subscribers can connect to those cells; and

if the new location area is an exclusive are, whether or not the subscriber is allowed to camp (e.g., connect) in the cell is determined by checking whether or not the subscriber has the localized service area (LSAs - LSA1-3) information of the cell and if the to the subscriber's local service area (LSAs - LSA1-3) information (see pg. 4, line 1-22; pg. 5, lines 14-27; pg. 14, line 21 - pg. 15, line 33) and

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if the subscriber has the localized service area information comparing the LSA-IDs of the subscriber to camp (i.e., connect) of the cell and allowing the subscriber to camp in the cell only if there is a match, and if the subscriber does not have the localized information the subscriber is not allowed to camp in the cell (see pg. 4, lines 1-22; pg. 5, lines 14-27; pg. 7, lines 26-28; pg. 14, line 21 - pg. 15, line 33).

Regarding **claim 27**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed, as applied above (see claim 22), in addition Salmela further discloses a method according to claim 22, further comprising:

defining location areas (LAI) so that when an exclusive access cell (e.g., C1) belongs to a location area (LAI), the other cells (e.g., C2 and C3) in that location area (LAI) are also exclusive cells (see pg. 4, lines 1-22; pg. 5, lines 14-27; pg. 8, lines 25-30; pg. 12, line 20 - pg. 13, line 5; pg. 14, line 26 - pg. 15, line 3; pg. 8, lines 17-25; pg. 15, lines 14-24; Fig. 1);

maintaining information about location areas (LAI) comprising exclusive cells (C1-C3, C5, C11) (see pg. 4, lines 18-22; pg. 5, lines 19-27; pg. 8, lines 14-30; pg. 11, lines 20-35; pg. 12, line 20 - pg. 13, line 5; pg. 13, lines 18-26; pg. 14, lines 28-35; pg. 15, lines 26-33; Fig. 1); and

using that information to decide whether the location area of the cell is an exclusive location area (LSAs - LSA1-3) (see pg. 5, lines 19-27; pg. 8, lines 14-30; pg. 11, lines 20-35; pg. 12, line 20 - pg. 13, line 5; pg. 13, lines 18-26; pg. 14, line 22 - pg. 15, line 33).

Regarding **claim 31**, Salmela discloses a system according to claim 30, wherein

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the network is configured to further broadcast an indication (EA) (e.g., message) that the cell is an exclusive cell when the cell belongs to an exclusive location area (LSAs - LSA1-3) (see pg. 1, lines 14-18; pg. 2, lines 6-11; pg. 4, lines 26-28; pg. 6, lines 7-20; pg. 12, line 29 - pg. 13, line 5; pg. 13, line 31 - pg. 14, line 5; pg. 8, lines 17-25; pg. 15, lines 14-24). Salmela does not specifically disclose having the features the mobile station is configured, in response to receiving a new LAC and said indication EA, to determine whether the mobile station is allowed to camp in the cell, and if it is allowed, to send a location update request to the network, or if it is not allowed, to try to find a suitable cell in which to camp and if a suitable cell is not found, to enter a limited service state. However, the examiner maintains that the features the mobile station is arranged, in response to receiving a new location area identity LAC and said indication EA, to determine whether the mobile station is allowed to camp in the cell, and if it is allowed, to send a location update request to the network, or if it is not allowed, to try to find a suitable cell in which to camp was well known in the art, as taught by Nordstrand.

In the same field of endeavor, Nordstrand discloses the features

the mobile station is configured, in response to receiving a new LAC (e.g., cell-related information) and said indication EA (e.g., message), to determine whether the mobile station is allowed to camp in the cell (see abstract; col. 4, lines 39-50; col. 5, lines 1-20, 28-59; col. 7, lines 14-29, 43-49; col. 8, lines 9-17), where the location update request is not explicitly mentioned but is inherent from the conventional techniques (see col. 11, lines 4-6), and

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if it is allowed, to send a location update request to the network (see abstract; col. 4, lines 6-12, 32-50; col. 5, lines 1-20, 28-59; col. 6, lines 1-20, 28-45; Figs. 4-5), or

if it is not allowed, to try to find a suitable cell in which to camp (see col. 10, line 41 - col. 11, line 6; Fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salmela and Nordstrand to have the features the mobile station is configured, in response to receiving a new LAC and said indication EA, to determine whether the mobile station is allowed to camp in the cell, and if it is allowed, to send a location update request to the network, or if it is not allowed, to try to find a suitable cell in which to camp, in order to save radio and network resources, as taught by Nordstrand (see col. 7, lines 22-29; col. 8, lines 10-17). The combination of Salmela and Nordstrand does not specifically disclose having the feature if a suitable cell is not found, to enter a limited service state. However, the examiner maintains that the feature if a suitable cell is not found, to enter a limited service state was well known in the art, as taught by Seppanen.

In the same field of endeavor, Seppanen discloses the feature if a suitable cell is not found, to enter a limited service state (see col. 10, lines 5-12), where a mobile terminal having enhanced system selection capability enters a limited service state if a suitable system cell for communication is not found.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salmela, Nordstrand, and

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Seppanen to have the feature if a suitable cell is not found, to enter a limited service state, in order to save battery power and/or processing resources, as taught by Seppanen.

Regarding **claim 32**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed, as applied above (see claim 22), in addition Salmela further discloses a network according to claim 12, wherein the network (i.e., system) comprises local service areas (LSAs - LSA1-3) each indicated by a Local Service Area identification (LSA-ID) (e.g., LSAs - LSA1-3) defining local services for subscribers via cells or a cell defined as belonging to a local service area LSA (LSAs - LSA1-3) (see pg. 4, lines 1-12; pg. 7, lines 26-28; Fig. 1), and

the network is further configured to receive information (e.g., LAI) on the local service area LSA (LSAs - LSA1-3) of the cell and to determine whether the subscriber is allowed to camp (i.e., connect) in the cell by checking whether or not the subscriber has the local service area (LSA-ID) (e.g., LSAs - LSA1-3) information of the cell to the subscriber's local service area (LSAs - LSA1-3) information (LSA-ID) and if the subscriber has the localized area information the network is further configured to compare the LSA-IDs of the cell with the subscriber's LSA_ID and to allow the subscriber to camp in the cell only if there is a match, and if the subscriber does not have the localized service information, the network is further configured to determine that the subscriber is not allowed to camp in the cell (see pg. 4, lines 1-22; pg. 5, lines 14-27; pg. 14, line 21 - pg. 15, line 33).

Regarding **claim 33**, the claim as applied to claim 30 are rejected for the same reasons as set forth above in **claim 22**.

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Regarding **claim 35**, the claim as applied to claim 30 are rejected for the same reasons as set forth above in **claim 22**.

Regarding **claim 36**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed, as applied above (see claim 34), in addition Salmela further discloses a network element according to claim 34, wherein the information about location areas defined as exclusive location areas (LSAs - LSA1-3) comprises location areas (LSAs - LSA1-3) having at least one cell which is in the area of the network element (e.g., database) (see pg. 5, lines 19-27; pg. 15, lines 14-25), where location areas are in the vicinity of the HLR or VLR.

Regarding **claim 38**, Salmela discloses a method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system comprising cells (see abstract; pg. 1, lines 4-6; pg. 8, lines 17-25; pg. 4, lines 9-12; pg. 14, lines 22-25; Figs. 1), where the system provides restricting connection of a mobile station (MS) to a cell, the method comprising:

defining a group of cells so that each cell of the mobile communications system belongs to one location area of a plurality of location areas each location area being identified with a respective LAC, wherein within each location area, the mobile station may move without updating its location (see abstract; pg. 1, lines 4-6; pg. 8, lines 17-25; pg. pg. 4, lines 9-12; pg. 14, lines 22-25; Figs. 1), where the system provides restricting connection of a mobile station (MS) to a cell,

defining a portion of the plurality of location areas to be exclusive location areas, each of said portion being identified with a respective Location Area Code (LAC), each

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exclusive location area comprising cells for which an exclusive service condition is defined, wherein, within each exclusive location area, the mobile station may move without updating its location (see pg. 4, lines 1-12; pg. 5, lines 14-18; pg. 7, lines 26-28; pg. 8, lines 6-12; Figs. 1-2), where the system can determine which cells are special cells (see pg. 5, lines 19-27; pg. 12 lines 20-27);

broadcasting an LAC of a particular cell and, if the particular cell provides special services only to some subscribers, broadcasting an localized service area identification (LSA-ID) of each service cell provides (see abstract; pg. 2, lines 6-11; pg. 4, lines 26-28; pg. 13, line 31 - pg. 14, line 5; pg. 1, lines 4-6; pg. 8, lines 17-25; pg. pg. 4, lines 9-12; pg. 14, lines 22-25; Figs. 1), where the system provides restricting connection of a mobile station (MS) to a cell;

receiving, via the particular cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area and includes a LAC for the new location area to which the subscriber would like to update (i.e., location area identifier/index - LAI) (see pg. 2, lines 9-17; pg. 2, line 35 - pg. 3, line 2; pg. 4, lines 23-24; pg. 4, line 31 - pg. 5, line 9; pg. 8, lines 13-16; pg. 9, lines 19-23; pg. 10, lines 25-29; pg. 11, lines 19-23; pg. 14, lines 21-25; Figs. 2-5 "message 21");

checking during the location update procedure whether the new location area (i.e., location area identifier/index - LAI) indicated by the LAC (e.g., location area identifier - LAI) is defined as an exclusive location area (LSAs - LSA1-3) (see pg. 5, lines 6-9; pg. 6,

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lines 12-19; pg. 8, lines 17-25; pg. 11, lines 23-26; pg. 12, lines 10-19; pg. 14, lines 26-31; pg. 15, lines 14-24); and

if the new location area (i.e., location area identifier - LAI) is an exclusive location area (LSAs - LSA1-3) (see pg. 12, line 28 - pg. 13, line 5; pg. 14, lines 28-31; pg. 15, lines 14-24),

using the exclusive service condition of the cell (C1-C3, C5, C11) in determining whether or not the subscriber is allowed to camp (i.e., connect) in the cell (see pg. 14, lines 14-18; pg. 14, line 28 - pg. 15, line 3; pg. 15, lines 14-24; pg. 8, lines 6-12; Fig. 1-2),

allowing the mobile station (MS) to camp (i.e., connect) in the cell by accepting the location update if the subscriber is allowed to camp (i.e., connect) in the cell (see pg. 13, lines 1-5; pg. 14, lines 14-18; pg. 14, line 35 - pg. 15, line 1; pg. 15, lines 14-24), and

preventing (i.e., restricting) the mobile station (MS) from camping (i.e., connecting) in the cell by rejecting the location update if the subscriber is not allowed to camp (i.e., connect) in the cell (see pg. 13, lines 1-5; pg. 5, lines 14-18, 21-35; pg. 15, lines 1-34);

wherein cells providing the same special service are grouped to form a localized service area, which is other than the location areas and the exclusive location areas (see abstract; pg. 1, lines 4-6; pg. 8, lines 17-25; pg. pg. 4, lines 9-12; pg. 14, lines 22-25; Figs. 1), where the system provides restricting connection of a mobile station (MS) to a cell. Salmela inexplicitly discloses having the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has subscribed a specific special service with restricted access right; and if the subscriber has subscribed the

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specific special service, using its restricted access right to determine whether or not the subscriber is allowed to camp in the cell; and if the subscriber has not subscribed the specific special service, allowing the subscriber to camp in the cell. However, the examiner maintains that the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has subscribed a specific special service with restricted access right; and if the subscriber has subscribed the specific special service, using its restricted access right to determine whether or not the subscriber is allowed to camp in the cell; and if the subscriber has not subscribed the specific special service, allowing the subscriber to camp in the cell was well known in the art, as taught by Nordstrand.

In the same field of endeavor, Nordstrand discloses the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has subscribed a specific special service with restricted access right (see abstract; col. 4, lines 6-9, 32-50; col. 6, lines 1-20, 28-45);

if the subscriber has subscribed the specific special service, using its restricted access right to determine whether or not the subscriber is allowed to camp in the cell (see abstract; col. 4, lines 39-50; col. 5, lines 1-20, 28-59; col. 7, lines 14-29, 43-49; col. 8, lines 9-17); and

if the subscriber has not subscribed the specific special service, allowing the subscriber to camp in the cell (see col. 10, line 41 - col. 11, line 6; Fig. 4). As further support, Nordstrand at the least further discloses wherein cells providing the same special service are grouped to form a localized service area, which is other than the location areas

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and the exclusive location areas (see col. 8, lines 20-30,35-38; col. 9, lines 28-37,51-61; Fig. 1), where microcells are grouped for access by a particular group (e.g., employees) in which the microcells have certain criterion (e.g., C1 or C2) and may be part of different macrocells.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salmela and Nordstrand to have the feature(s) if the new location area is not an exclusive location area: checking whether or not the subscriber has subscribed a specific special service with restricted access right; and if the subscriber has subscribed the specific special service, using its restricted access right to determine whether or not the subscriber is allowed to camp in the cell; and if the subscriber has not subscribed the specific special service, allowing the subscriber to camp in the cell, in order to save radio and network resources, as taught by Nordstrand (see col. 7, lines 22-29; col. 8, lines 10-17). The combination of Salmela and Nordstrand clearly discloses the feature(s) indicated above as evidenced by the fact that one of ordinary skill in the art would clearly recognize. However, the examiner maintains that the feature(s) a method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system was well known in the art, as taught by Seppanen.

As further support in the same field of endeavor, Seppanen discloses the feature(s) a method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system (see col. 10, lines 5-12), where a

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mobile terminal having enhanced system selection capability enters a limited service state if a suitable system cell for communication is not found.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salmela and Nordstrand as further supported by Seppanen to have the feature(s) a method for deciding whether a mobile station used by a subscriber is allowed to camp in a cell of a mobile communications system, in order to save battery power and/or processing resources, as taught by Seppanen.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Salmela et al.** (hereinafter Salmela) (**WO 98/30056**) in view of **Nordstrand** (**US 6,334,052 B1**) and **Seppanen et al.** (hereinafter Seppanen) (**US 5,903,832**) as applied to claim 22 above, and further in view of **Rune** (**US 6,212,390 B1**).

Regarding **claim 28**, the combination of Salmela, Nordstrand, and Seppanen discloses every limitation claimed as applied above. The combination of Salmela, Nordstrand, and Seppanen does not specifically disclose having the feature(s) rejecting the location update with the cause "roaming not allowed in this location area". However, the examiner maintains that the feature(s) rejecting the location update with the cause "roaming not allowed in this location area" was well known in the art, as taught by Rune.

In the same field of endeavor, Rune discloses the feature(s) rejecting the location update with the cause "roaming not allowed in this location area" (see col. 8, line 1-4; Fig. 5 'ref. 580').

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Salmela, Nordstrand, Seppanen, and Rune to have the feature(s) rejecting the location update with the cause “roaming not allowed in this location area”, for the purpose of allowing a restricted area to be defined in real-time and/or relative to the subscriber’s terminal at the time of attempted access, as taught by Rune (see col. 4, lines 47-50).

(10) Response to Argument

A. Brief Description of Communication Systems

A1. ...Some base stations can...provide a certain special service for all mobile station of the network, e.g., call charges below the normal tariff... (for above paragraph - see substitute specification, section background of the invention, pg. 1, [0004, lines 19-21]).

A2. Within the context of this application, such special service areas are referred to as localized service areas LSA and support for LSA is called SoLSA...mobile station indicates...certain special features (like lower rates or extra services) are available... (for above paragraph - see substitute specification, section background of the invention, pg. 1, [0005, lines 1-7]).

A3. ...LSA extends the operator’s capability to offer different service features to subscribers or subscriber groups, different tariffs and different access rights depending on the location of the subscriber...LSAs are indoor office cells...a home or office and its

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neighbourhood, an industry area...or part or several locations of a city. (for above paragraph - see substitute specification, section background of the invention, pg. 2, [0006]).

A4. One feature of the concept of LSA is exclusive access EA...exclusive access cell is a cell where only mobile stations having the same exclusive access information as the cell are allowed to camp...other users' mobile station must be prevented from camping in that cell... (for above paragraph - see substitute specification, section background of the invention, pg. 2, [0008]).

A5. ...exclusive location areas comprising exclusive cells, i.e., cells with restricted access. Separate location areas are used for the normal cells, i.e., non-exclusive cells...*a user of a member group* it is meant that the subscriber fulfills the necessary conditions defined for the exclusive cell... (for above paragraph - see substitute specification, section brief description of the invention, pg. 3, [0011-0012]).

A6. ...the concept of LSA, the exclusive access cells and the non-exclusive access cells of one location service area should have different location areas...exclusive access cells...may belong to one exclusive location area... (for above paragraph - see substitute specification, section detailed description of the invention, pg. 6, [0025]).

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A7. ...mobile station has to enter a limited service state where emergency calls can be made and the MS tries to find a suitable cell... (for above paragraph - see substitute specification, section detailed description of the invention, pg. 8, [0039]).

The Examiner's response to the arguments of the brief concerning the art rejection of claims 22-38 are as follows:

B1. Argument of Claim 38 (i.e., 112, 1st) (see brief - item VII-A, pgs. 15-16)

Appellant argues -

- a. ...**localized service area** is *different* from the one **location service area**... (see pg. 16, 1st full par.)
- b. ...*clear support, at paragraph [0024]...for...other than location areas and the exclusive location areas*... (see pg. 16, 2nd full par.)

B2. Response to argument of B1

Regarding appellant's arguments above (see B1), the Examiner respectfully disagrees. The new matter language (see item 9-A above) added to instant application is clearly new matter nor was the new matter language in any other portion of the instant application. Claim 38 recites "...wherein **cells** providing the same **special service** are grouped to **form a localized** service area, which is other than the location areas and the exclusive location areas..." (hereinafter Recite A) (see claim 38, lines 34-35). In other words, Recite A indicates a localized service area is comprised of **cells** providing the

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same special service and the localized service area (including cells) are **not** location areas and exclusive location areas. As a note, appellant above (see B1) indicates support found in paragraph [0024] (i.e., orig. spec.) (also, see substitute spec. pg. 6, [0025]). For example, the support recites "...applying the concept of **LSA**..." (see orig. spec., par. [0024, line 1]). Example 2, the support recites "...**exclusive** access cells and the non-exclusive access cells of one location service area..." (see orig. spec., par. [0024, lines 2-3]). Example 3, the support recites "...location service area identities **LSA** ID(s)..." (see orig. spec., par. [0024, line 8]).

Appellant is advised to review the following:

- a. Claim 38 recites "...localized service area identification (**LSA** ID)..." in line 13 of the claim.
- b. Item 10-A2 above indicates special service areas are referred to as *LSA* which is an abbreviation for *localized service area*.
- c. Item 10-A4 above indicates that an LSA includes an *exclusive* access (EA) cell.

How is a **localized** service area **different** from a **location** service area since both appear to have overlapping description and share the same abbreviation **LSA**? Appellant at the least admits -

Admission #1 "...*instant application...employs...location service area...and local service area...but these are **synonymous** with localized service area...*" (see par. bridging pgs. 20-21).

Appellant's argument above (see B1) is a contradiction to appellant's Admission #1.

Therefore, the specification (i.e., original and substitute) describes a cell providing the

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same special service is grouped to form a localized service area (LSA) in which the cell can be an exclusive cell in an exclusive location area of the LSA.

C1. Argument of Claims 22-27 and 29-38 (see brief - item VII-B, pgs. 17-19)

Appellant argues -

- a. *...no other explanation regarding the properties of these cells...no basis...that the localized service areas...constitute a disclosure...that a location area is either an exclusive one or a non-exclusive one...* (see pg. 17, 3rd full par.)
- b. *...a location area is never an exclusive location area...* (see par. bridging pgs. 18-19)

C2. Response to argument of C1

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding appellant's arguments above (see C1), the Examiner respectfully disagrees. Appellant has failed to interpret and appreciate the combined teachings of the prior art Salmela and Nordstrand that clearly discloses the claimed feature(s) as would be clearly recognized by one of ordinary skill in the art. Appellant at the least admits -

Admission #2 “*...Salmela...teaches...location areas...*” (see pg. 19, 1st full par.);

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Admission #3 “...*Salmela...teaches...localized service areas...*” (see pg. 19, 2nd full par.).

Note #1, see above items 10-A2, 10-A3, 10-A4, & 10-A5. **Note #2**, the claim language and appellant's arguments includes alternative (optional) language such as *whether, or, if*, and/or *whether or not*. In particular, Salmela discloses the argument(s) as related to the claimed feature(s)

defining some of the location areas (LAs) to be localized service areas (LSAs - LSA1-3) which reads on the claimed “exclusive location areas” each exclusive location being identified with a respective LAC (e.g., LAI) { (see pg. 8, lines 6-12,24-25; pg. 12, lines 28-31; Fig. 1), where the system has location areas (LA) that have location area identifiers (LAI), and the **special service area** with **special cells** is **referred to** as **LSA** (localized service area) (see pg. 5, lines 14-18), and where localized services areas can be subscriber specific or subscriber group specific, provide call charges below normal tariff (see pg. 5, lines 21-23; pg. 12, lines 20-25; pg. 15, lines 26-32), and where special cells of a network can be restricted or permitted (see pg. 14, lines 13-15,18,36; pg. 5, lines 17-18,21-23; pg. 8, lines 6-12), and where special cells of a network can be forbidden (e.g., common) and a mobile station can connect to the forbidden cell to receive network services (see pg. 14, lines 15-17,19-20) (also, see pg. 4, lines 2-6,9-12; pg. 5, lines 21-27; pg. 12, lines 20-25; pg. 14, lines 28-36; pg. 15, lines 26-32). }, and

an exclusive location area (LSA1) comprising special cells (C1-C3, C5, C11) which reads on the claimed “exclusive cells” for which a special service which reads on the claimed “exclusive service” condition is defined { (see pg. 4, lines 1-12; pg. 5, lines 14-

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18; pg. 7, lines 26-28; pg. 8, lines 6-12; Figs. 1-2), where the system can determine which cells are special cells (see pg. 5, lines 19-27; pg. 12 lines 20-27) },

so that a location area (e.g., LA) is either an exclusive location area (e.g., LSA1 or special cell C1) or a non-exclusive location area { (see pg. 5, lines 19-27; pg. 12 lines 20-27; pg. 15, lines 263-32), where the system has locations areas that can be permitted or forbidden for different mobile stations and provide common service within a communication system as evidenced by the fact that one of ordinary skill in the art would clearly recognize, and where the system has identifiers or indicators for characteristics of cells or areas (see pg. 12, lines 29-33; pg. 13, lines 11; pg. 14, lines 1-7; pg. 16, lines 25-30; pg. 18, lines 21-26). }. As further support in the same field of endeavor, Nordstrand discloses the argument(s) as related to the claimed feature(s)

area (e.g., service area) is either an exclusive location area (e.g., exclusive access) or a non-exclusive location area (e.g., allowed part of network) { (see abstract; col. 4, lines 6-9; col. 7, lines 14-29; col. 10, lines 61-63; Figs. 1 and 4 'ref. 403 & 405'), where some mobile stations may have exclusive access to a particular cell, and where the network or area has a suitable cell that a mobile station can add for usage (see col. 11, lines 29-34; Fig. 5 'ref. 505') as evidenced by the fact that one of ordinary skill in the art would clearly recognize }. Therefore, the combination(s) of the reference(s) Salmela and Nordstrand as addressed above more than adequately meets the claim limitations.

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D1. Argument of Claims 22-27 and 29-38 (see brief - item VII-B, pgs. 18-20)

Appellant argues -

- a. ...*fails to teach...checking whether the new location is an exclusive one or non-exclusive one...* (see par. bridging pgs. 18-19)
- b. ...*location update procedure and location areas...* (see par. bridging pgs. 19-20)

D2. Response to argument of D1

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding appellant's arguments above (see D1), the Examiner respectfully disagrees. Appellant has failed to interpret and appreciate the combined teachings of the prior art Salmela and Nordstrand that clearly discloses the claimed feature(s) as would be clearly recognized by one of ordinary skill in the art. **Note #1**, see above items 10-A2, 10-A3, 10-A4, & 10-A5. **Note #2**, the claim language and appellant's arguments includes alternative (optional) language such as *whether, or, if*, and/or *whether or not*. In particular, Salmela discloses the argument(s) as related to the claimed feature(s)

checking during the location update procedure whether the new location area (i.e., location area identifier/index - LAI) indicated by the LAC (e.g., location area identifier - LAI) is defined as an exclusive location area (LSAs - LSA1-3) { (see pg. 8, lines 20-22; pg. 14, lines 28-36; pg. 15, lines 20-22,26-32), where the system checks to see if the new

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location area includes special cells (see pg. 5, lines 14-18; pg. 12, line 28 - pg. 13, line 11) },

if the new location area (i.e., location area identifier - LAI) is an exclusive location area (LSAs - LSA1-3) { (see pg. 14, lines 13-15,18,36; pg. 5, lines 17-18,21-23; pg. 8, lines 6-12), where special cells of a network can be restricted or permitted },

if the new location area (i.e., location area identifier - LAI) is not an exclusive location area (LSAs - LSA1-3) { (see pg. 14, lines 15-17,19-20; pg. 5, lines 17-18), where special cells of a network can be forbidden (e.g., common) and a mobile station can connect to the forbidden cell to receive network services }. As further support in the same field of endeavor, Nordstrand discloses the argument(s) as related to the claimed feature(s)

if the new location area is an exclusive location area (e.g., exclusive access) { (see abstract; col. 4, lines 6-9,32-50; col. 7, lines 14-29; col. 8, lines 9-17; col. 10, lines 61-63; Figs. 1 and 4 'ref. 403 & 405'), where some mobile stations may have exclusive access to a particular cell. },

if the new location area is not an exclusive location area (e.g., allowed part of network) { (see col. 11, lines 29-34; Fig. 5 'ref. 505'), where the network or area has a suitable cell that a mobile station can add for usage as evidenced by the fact that one of ordinary skill in the art would clearly recognize }. Therefore, the combination(s) of the reference(s) Salmela and Nordstrand as addressed above more than adequately meets the claim limitations.

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E1. Argument of Claims 22-27 and 29-38 (see brief - item VII-B, par. bridging pgs. 19-20)

Appellant argues -

- a. *...suitable network is different than a suitable cell...* (see par. bridging pgs. 19-20)
- b. *...fails to teach...when a suitable cell is not found, the mobile terminal enters the limited service state...* (see par. bridging pgs. 19-20)

E2. Response to argument of E1

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding appellant's arguments above (see E1), the Examiner respectfully disagrees. Appellant has failed to interpret and appreciate the combined teachings of the prior art Salmela, Nordstrand, and Seppanen that clearly discloses the claimed feature(s) as would be clearly recognized by one of ordinary skill in the art. Appellant at the least admits -

Admission #4 “*...is true that Seppanen...suggests...searching for a suitable network and if suitable network is not found, the mobile enters the limited service state ...*” (see par. bridging pgs. 19-20).

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See item 10-A7 above. In particular, Salmela discloses the argument(s) as related to the claimed feature(s)

suitable cell not found { (see pg. 8, lines 8-9), where the connection of a mobile station to a cell can be barred. }. As further support in the same field of endeavor, Nordstrand discloses the argument(s) as related to the claimed feature(s)

suitable cell not found { (see col. 7, line 67 - col. 8, line 3; col. 10, lines 43-46; Fig. 4 '401'), where a cell is barred and not suitable. }. As further support in the same field of endeavor, Seppanen discloses the argument(s) as related to the claimed feature(s)

if a suitable cell is not found, entering a limited service state { (see col. 10, lines 5-12), where a mobile terminal having enhanced system selection capability enters a limited service state (e.g., only emergency call) when a network is barred from use, and where a mobile station (e.g., **cellular** radiotelephone 10) communicates with a base station (e.g., 30₁) which is part of a **cellular** network (e.g., 32₁) (see col. 5, lines 11-19; Fig. 2B)}. Therefore, the combination(s) of the reference(s) Salmela, Nordstrand, and Seppanen as addressed above more than adequately meets the claim limitations.

F1. Argument of Claim 28 (see brief - item VII-C, pg. 21)

Appellant argues - ...*does not cure the deficiencies...argued supra...*

F2. Response to argument of F1

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections

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are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding appellant's arguments above (see F1), the Examiner respectfully disagrees. Appellant has failed to interpret and appreciate the teachings of the applied prior art Salmela, Nordstrand, Seppanen, and Rune that clearly discloses the claimed feature(s) as would be clearly recognized by one of ordinary skill in the art.

Consequently, all applied reference(s) were well known prior art prior to the filing of the instant application. Therefore, the claims are addressed for the same reasons as set forth above.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

(12) Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/WJD,Jr/

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14 July 2010

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